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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,790	08/01/2003	Maki Hamaguchi	240883US0	1684

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
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EXAMINER

MOORE, KARLA A

ART UNIT PAPER NUMBER

1763

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/631,790

Applicant(s)

HAMAGUCHI, MAKI

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0803.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the restriction requirement in the reply filed on 28 April 2005 is acknowledged. The traversal is on the ground(s) that 1) the Office has not met the burden of showing that the product as claimed can be made by another materially different process and 2) the search of all claims would not impose a serious burden on the Office. This is not found persuasive because 1) clearly the product can be made by another materially different process that included additional steps, for instance a curing step; and 2) because the product could be produced by other materially different processes the search for the product would be much greater in scope than the search for the process, and thus would impose a serious burden.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 5-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention of Group I, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 28 April 2005.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,383,333 to Haino et al. in view of U.S. Patent No. 5,993,596 to Uwai et al.

5. Haino et al. disclose a component of glass-like carbon capable of being used in a CVD apparatus substantially as claimed and characterized by having a value of surface roughness (R_a) ranging from 0.1 to 10 μm (abstract).

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6. However, Haino et al. do teach that it is important to perform a purification process (column 4, rows 30-33), Haino et al. fail to teach the component containing in its surface iron, copper chromium, sodium, potassium, calcium, magnesium, and aluminum each in an amount less than 5×10 atoms/cm².

7. Uwai et al. teach that a component for plasma processing having a high purity, that is reduced metal impurity content, for the purpose of preventing diffusion of the impurities into wafers to be processed and contamination of the wafers with fine particles (column 4, rows 1-7).

8. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a plasma processing component (to be used in CVD, for example) with a reduced metal impurity content in order to prevent diffusion of the impurities into wafers to be processed and contamination of the wafers with fine particles as taught by Uwai et al.

9. Examiner recognizes that the prior art does not teach specific values for the reduction of the metal impurities. However, the courts have ruled that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

10. With respect to claim 4, the component may be any of an inner tube (abstract), a wafer boat, a susceptor and a nozzle capable of being used for CVD apparatus.

11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haino et al. and Uwai et al. as applied to claims 1 and 4, and further in view of U.S. Patent No. 5,324,411 to Ichishima et al.

12. Haino et al. and Uwai et al. fail to explicitly teach that the component has a surface finished such that there exist at least five pits, 1-10 μm (claim 2) or 0.5-5 μm (claim 3) in diameter, in the visual field, 50*50 μm .

13. Ichishima et al. teach the porosity of a glass-like carbon component for a plasma processing apparatus must be optimized by taking into account that if the pores are too small the surface area of the component will be too large and the pores are likely to absorb impurity gases and particles and on the other hand if the pores are too large damage will be done to gas flow and charge density. With respect to the density of the pores, if the density is too low the advantages of the charge density will be lessened

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and if the density is too high the absorption of impurity gases and particles becomes conspicuous (column 3, row 51-column 4, row 12).

14. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a glass-like carbon component with optimized porosity characteristics in Haino et al. and Uwai et al. in order to provided a component and process with optimized processing characteristics as taught by Ichishima et al.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP 5,807,416; USP 5,853,523; USP 5,951,814; USP 6,660,093; and JP 63017294A each disclose glassy carbon components.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore
Patent Examiner
Art Unit 1763
5 July 2005